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0228

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/071,751

DATE: 03/21/2002
TIME: 15:52:05

Input Set : N:\Crf3\RULE60\10071751.txt
Output Set: N:\CRF3\03212002\J071751.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Hunter, Shirley Wu
6 Sim, Gek-Kee
7 Weber, Eric R.

9 (ii) TITLE OF INVENTION: NOVEL ECTOPARASITE SALIVA PROTEINS AND
10 APPARATUS TO COLLECT SUCH PROTEINS

12 (iii) NUMBER OF SEQUENCES: 88

14 (iv) CORRESPONDENCE ADDRESS:

15 (A) ADDRESSEE: SHERIDAN ROSS P.C.
16 (B) STREET: 1560 BROADWAY, SUITE 1200
17 (C) CITY: DENVER
18 (D) STATE: CO
19 (E) COUNTRY: U.S.A.
20 (F) ZIP: 80202

22 (v) COMPUTER READABLE FORM:

23 (A) MEDIUM TYPE: Floppy disk
24 (B) COMPUTER: IBM PC compatible
25 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
26 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

28 (vi) CURRENT APPLICATION DATA:

C--> 29 (A) APPLICATION NUMBER: US/10/071,751
C--> 30 (B) FILING DATE: 07-Feb-2002
31 (C) CLASSIFICATION:

33 (vii) PRIOR APPLICATION DATA:

34 (A) APPLICATION NUMBER: 09/171,156
35 (B) FILING DATE: 1998-10-09

39 (viii) ATTORNEY/AGENT INFORMATION:

40 (A) NAME: Connell, Gary J.
41 (B) REGISTRATION NUMBER: 32,020
42 (C) REFERENCE/DOCKET NUMBER: 2618-17-C4-PUS

44 (ix) TELECOMMUNICATION INFORMATION:

45 (A) TELEPHONE: 303/863-9700
46 (B) TELEFAX: 303/863-0223

49 (2) INFORMATION FOR SEQ ID NO: 1:

51 (i) SEQUENCE CHARACTERISTICS:

52 (A) LENGTH: 26 amino acids
53 (B) TYPE: amino acid
54 (C) STRANDEDNESS:
55 (D) TOPOLOGY: linear

57 (ii) MOLECULE TYPE: protein

59 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

61 Met Arg Gly Asn His Val Phe Leu Glu Asp Gly Met Ala Asp Met Thr

ENTERED

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62 1 5 10 15
64 Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr
65 20 25
67 (2) INFORMATION FOR SEQ ID NO: 2:
69 (i) SEQUENCE CHARACTERISTICS:
70 (A) LENGTH: 12 amino acids
71 (B) TYPE: amino acid
72 (C) STRANDEDNESS:
73 (D) TOPOLOGY: linear
75 (ii) MOLECULE TYPE: protein
77 (ix) FEATURE:
78 (A) NAME/KEY: Xaa = Tyr or Asp
79 (B) LOCATION: 5
81 (ix) FEATURE:
82 (A) NAME/KEY: Xaa = any amino acid
83 (B) LOCATION: 6
86 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
W--> 88 Lys Tyr Arg Asn Xaa Xaa Thr Asn Asp Pro Gln Tyr
89 1 5 10
91 (2) INFORMATION FOR SEQ ID NO: 3:
93 (i) SEQUENCE CHARACTERISTICS:
94 (A) LENGTH: 27 amino acids
95 (B) TYPE: amino acid
96 (C) STRANDEDNESS:
97 (D) TOPOLOGY: linear
99 (ii) MOLECULE TYPE: protein
101 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
103 Glu Ile Lys Arg Asn Asp Arg Glu Pro Gly Asn Leu Ser Lys Ile Arg
104 1 5 10 15
106 Thr Val Met Asp Lys Val Ile Lys Gln Thr Gln
107 20 25
109 (2) INFORMATION FOR SEQ ID NO: 4:
111 (i) SEQUENCE CHARACTERISTICS:
112 (A) LENGTH: 23 amino acids
113 (B) TYPE: amino acid
114 (C) STRANDEDNESS:
115 (D) TOPOLOGY: linear
117 (ii) MOLECULE TYPE: protein
119 (ix) FEATURE:
120 (A) NAME/KEY: Xaa = Ala or His
121 (B) LOCATION: 8
123 (ix) FEATURE:
124 (A) NAME/KEY: Xaa = Ala or His
125 (B) LOCATION: 9
127 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
W--> 129 Leu Lys Asp Asn Asp Ile Tyr Xaa Xaa Arg Asp Ile Asn Glu Ile Leu
130 1 5 10 15
132 Arg Val Leu Asp Pro Ser Lys
133 20

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135 (2) INFORMATION FOR SEQ ID NO: 5:

137 (i) SEQUENCE CHARACTERISTICS:

138 (A) LENGTH: 27 amino acids

139 (B) TYPE: amino acid

140 (C) STRANDEDNESS:

141 (D) TOPOLOGY: linear

143 (ii) MOLECULE TYPE: protein

145 (ix) FEATURE:

146 (A) NAME/KEY: Xaa = any amino acid

147 (B) LOCATION: 12

149 (ix) FEATURE:

150 (A) NAME/KEY: Xaa = any amino acid

151 (B) LOCATION: 18

153 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

W--> 155 Asn Tyr Gly Arg Val Gln Ile Glu Asp Tyr Thr Xaa Ser Asn His Lys
156 1 5 10 15
W--> 158 Asp Xaa Glu Glu Lys Asp Gln Ile Asn Gly Leu
159 20 25

161 (2) INFORMATION FOR SEQ ID NO: 6:

163 (i) SEQUENCE CHARACTERISTICS:

164 (A) LENGTH: 18 amino acids

165 (B) TYPE: amino acid

166 (C) STRANDEDNESS:

167 (D) TOPOLOGY: linear

169 (ii) MOLECULE TYPE: protein

171 (ix) FEATURE:

172 (A) NAME/KEY: Xaa = any amino acid

173 (B) LOCATION: 5

176 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

W--> 178 Lys Tyr Arg Asn Xaa Tyr Thr Asn Asp Pro Gln Leu Lys Leu Leu Asp
179 1 5 10 15
181 Glu Gly

184 (2) INFORMATION FOR SEQ ID NO: 7:

186 (i) SEQUENCE CHARACTERISTICS:

187 (A) LENGTH: 22 amino acids

188 (B) TYPE: amino acid

189 (C) STRANDEDNESS:

190 (D) TOPOLOGY: linear

192 (ii) MOLECULE TYPE: protein

194 (ix) FEATURE:

195 (A) NAME/KEY: Xaa = any amino acid

196 (B) LOCATION: 13

198 (ix) FEATURE:

199 (A) NAME/KEY: Xaa = any amino acid

200 (B) LOCATION: 19

202 (ix) FEATURE:

203 (A) NAME/KEY: Xaa = any amino acid

204 (B) LOCATION: 21

206 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

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Input Set : N:\Crf3\RULE60\10071751.txt
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282 (ix) FEATURE:
283 (A) NAME/KEY: CDS
284 (B) LOCATION: 45..314
287 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
289 TGAAATTCAA TATTTGTTT TACATTAAT TTTCAAATT CGAT ATG AAA TTT TTA 56
290 Met Lys Phe Leu
291 1
293 CTG GCA ATT TGC GTG TTG TGT GTT TTA AAT CAA GTA TCT ATG TCA 104
294 Leu Ala Ile Cys Val Leu Cys Val Leu Leu Asn Gln Val Ser Met Ser
295 5 10 15 20
297 AAA ATG GTC ACT GAA AAG TGT AAG TCA GGT GGA AAT AAT CCA AGT ACA 152
298 Lys Met Val Thr Glu Lys Cys Lys Ser Gly Gly Asn Asn Pro Ser Thr
299 25 30 35
301 GAA GAG GTG TCA ATA CCA TCT GGG AAG CTT ACT ATT GAA GAT TTT TGT 200
302 Glu Glu Val Ser Ile Pro Ser Gly Lys Leu Thr Ile Glu Asp Phe Cys
303 40 45 50
305 ATT GGA AAT CAT CAA AGT TGC AAA ATA TTT TAC AAA AGT CAA TGT GGA 248
306 Ile Gly Asn His Gln Ser Cys Lys Ile Phe Tyr Lys Ser Gln Cys Gly
307 55 60 65
309 TTT GGA GGT GGT GCT TGT GGA AAC GGT TCA ACA CGA CCA AAT CAA 296
310 Phe Gly Gly Ala Cys Gly Asn Gly Ser Thr Arg Pro Asn Gln
311 70 75 80
313 AAA CAC TGT TAT TGC GAA TAACCATATT CCGGATGAAA GACCAAATTG 344
314 Lys His Cys Tyr Cys Glu
315 85 90
317 ATATAAATTAA CTAAAATTAT GCTAGATAGC AATCATAAAA TTTGAAGTT TTCAATGATC 404
319 CTAACATGTT TTGCCTCCAA TTTATTTAA CAGCAAATTG CTGGAACTTA CCGTACCGTA 464
321 ACTAAATGTT CAAGAAATAC TGAATGTTA CAAATAGATT ATTATAAATA TTGTAACATT 524
323 GTCTAATATT TATAAGAATT ATATAAACTG AATTGCAAAA A 565
325 (2) INFORMATION FOR SEQ ID NO: 12:
327 (i) SEQUENCE CHARACTERISTICS:
328 (A) LENGTH: 90 amino acids
329 (B) TYPE: amino acid
330 (D) TOPOLOGY: linear
332 (ii) MOLECULE TYPE: protein
334 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
336 Met Lys Phe Leu Leu Ala Ile Cys Val Leu Cys Val Leu Leu Asn Gln 15
337 1 5 10 15
339 Val Ser Met Ser Lys Met Val Thr Glu Lys Cys Lys Ser Gly Gly Asn
340 20 25 30
342 Asn Pro Ser Thr Glu Glu Val Ser Ile Pro Ser Gly Lys Leu Thr Ile
343 35 40 45
345 Glu Asp Phe Cys Ile Gly Asn His Gln Ser Cys Lys Ile Phe Tyr Lys
346 50 55 60
348 Ser Gln Cys Gly Phe Gly Gly Ala Cys Gly Asn Gly Ser Thr
349 65 70 75 80
351 Arg Pro Asn Gln Lys His Cys Tyr Cys Glu
352 85 90
354 (2) INFORMATION FOR SEQ ID NO: 13:

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/21/2002
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos.5,6
Seq#:4; Xaa Pos.8,9
Seq#:5; Xaa Pos.12,18
Seq#:6; Xaa Pos.5
Seq#:7; Xaa Pos.13,19,21
Seq#:29; Xaa Pos.379
Seq#:30; Xaa Pos.379
Seq#:35; N Pos. 192
Seq#:70; Xaa Pos.1,24

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:8; Line(s) 231
Seq#:9; Line(s) 245,247,249,251
Seq#:10; Line(s) 270
Seq#:11; Line(s) 289,293,297,301,305,309,313,317,319,321,323
Seq#:13; Line(s) 370,374,378,382,386,390
Seq#:15; Line(s) 440
Seq#:16; Line(s) 459
Seq#:17; Line(s) 477,479,483,487,491,495,500,504,508,512,516,520,524,526
Seq#:17; Line(s) 528,530,532
Seq#:19; Line(s) 587,589,591,593,595,597,599,601
Seq#:20; Line(s) 619,623,627,631,635,639,643,647,651,655,659,663,667,671
Seq#:20; Line(s) 675,679,683,687,691,695,699,703,707,711,715,719,723,727
Seq#:20; Line(s) 731,735,739,743,747,751,755,759,763,767,771,775,779,783
Seq#:20; Line(s) 787,791,795,799,803,807,811,815,819,823,827,831,835,839
Seq#:20; Line(s) 843
Seq#:22; Line(s) 1045,1049,1053,1057,1061,1065,1070,1074,1078
Seq#:24; Line(s) 1136,1140,1144,1148,1152,1156
Seq#:26; Line(s) 1205,1209,1213,1217,1221,1225,1229,1233,1237,1241,1245
Seq#:26; Line(s) 1249,1254,1258,1262,1266,1270,1274,1278,1282,1286,1290
Seq#:26; Line(s) 1294,1298,1302,1306,1310,1314,1318,1322,1326,1328,1330
Seq#:26; Line(s) 1332,1334
Seq#:28; Line(s) 1446,1448,1450,1452,1454,1456,1458,1460,1462,1464,1466
Seq#:28; Line(s) 1468,1470,1472,1474,1476,1478,1480,1482,1484,1486,1488
Seq#:28; Line(s) 1490,1492
Seq#:29; Line(s) 1514,1518,1522,1526,1530,1534,1538,1542,1546,1550,1554
Seq#:29; Line(s) 1558,1562,1566,1570,1574,1578,1582,1586,1590,1594,1598
Seq#:29; Line(s) 1602,1606,1610,1614,1618,1622,1626,1630,1634,1638,1642
Seq#:29; Line(s) 1646,1650,1654,1658
Seq#:31; Line(s) 1801,1803,1805,1807,1809
Seq#:32; Line(s) 1823,1825,1827,1829,1831,1833

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Seq#:33; Line(s) 1847,1849,1851,1853,1855,1857,1859
Seq#:34; Line(s) 1873,1875,1877,1879,1881
Seq#:35; Line(s) 1895,1897,1899,1901
Seq#:36; Line(s) 1919,1923,1927,1931,1935,1939,1943,1947
Seq#:38; Line(s) 2001,2005,2009,2013,2017,2021,2025,2029,2033,2037
Seq#:40; Line(s) 2089,2091,2093,2095,2097,2099
Seq#:41; Line(s) 2113,2115,2117,2119,2121,2123,2125,2127,2129
Seq#:42; Line(s) 2143,2145,2147,2149,2151,2153,2155,2157,2159,2161,2163
Seq#:43; Line(s) 2177,2179,2181,2183,2185,2187,2189,2191
Seq#:44; Line(s) 2205,2207,2209,2211,2213
Seq#:45; Line(s) 2227,2229,2231,2233,2235,2237,2239
Seq#:46; Line(s) 2253,2255,2257,2259,2261
Seq#:47; Line(s) 2275,2277,2279,2281,2283,2285,2287,2289,2291,2293,2295
Seq#:48; Line(s) 2313,2317,2321,2325,2329,2333,2337,2341,2345,2349,2353
Seq#:48; Line(s) 2357
Seq#:50; Line(s) 2424,2428,2432,2436,2440,2444,2448,2452,2456
Seq#:52; Line(s) 2514,2518,2522,2526,2530,2534,2538,2542,2544,2546,2548
Seq#:52; Line(s) 2550
Seq#:54; Line(s) 2593,2595,2597,2599,2601,2603,2605,2607,2609,2611
Seq#:55; Line(s) 2629,2633,2637,2641,2645,2649
Seq#:57; Line(s) 2694,2696,2698,2700,2702
Seq#:58; Line(s) 2720,2724,2728,2732,2736
Seq#:60; Line(s) 2779,2781,2783,2785
Seq#:61; Line(s) 2803,2807,2811,2815,2819,2823,2827,2831,2835,2839,2843
Seq#:61; Line(s) 2845,2847,2849,2851,2853,2855,2857,2859
Seq#:63; Line(s) 2914,2916,2918,2920,2922,2924,2926,2928,2930,2932,2934
Seq#:63; Line(s) 2936,2938,2940,2942,2944,2946
Seq#:64; Line(s) 2964,2968,2972,2976,2980,2984,2988,2992,2996,3000,3004
Seq#:64; Line(s) 3008,3012,3016,3020,3024,3028,3032,3036,3040,3044,3048
Seq#:64; Line(s) 3052,3056,3058
Seq#:66; Line(s) 3152,3154,3156,3158,3160,3162,3164,3166,3168,3170,3172
Seq#:66; Line(s) 3174,3176,3178,3180,3182,3184,3186,3188,3190,3192
Seq#:67; Line(s) 3211,3215,3219,3223,3227,3231,3235,3239,3243,3247,3251
Seq#:67; Line(s) 3255,3259,3263,3267,3271,3275,3279,3283,3287,3291,3295
Seq#:67; Line(s) 3299
Seq#:69; Line(s) 3395,3397,3399,3401,3403,3405,3407,3409,3411,3413,3415
Seq#:69; Line(s) 3417,3419,3421,3423,3425,3427,3429
Seq#:71; Line(s) 3475,3479,3483,3487,3491,3495,3499,3503,3507
Seq#:73; Line(s) 3562,3564,3566,3568,3570,3572,3574
Seq#:74; Line(s) 3593,3597,3601,3605,3609,3613,3615,3617
Seq#:76; Line(s) 3657,3659,3661,3663,3665,3667,3669
Seq#:79; Line(s) 3733
Seq#:80; Line(s) 3752
Seq#:81; Line(s) 3771
Seq#:82; Line(s) 3790
Seq#:83; Line(s) 3809
Seq#:84; Line(s) 3828
Seq#:85; Line(s) 3847
Seq#:86; Line(s) 3866

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Seq#:88; Line(s) 3907

VERIFICATION SUMMARY
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Input Set : N:\Crf3\RULE60\10071751.txt
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L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:88 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:16
L:178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:208 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:211 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:16
L:1607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:1152
L:1747 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:368
L:3452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:0
L:3455 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:16